Society Reports.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, March 2, 1886.

The Vice-President, LEONARD WEBER, M.D., in the Chair.

Dr. SPITZKA exhibited the brain of a porpoise, demonstrating the absence of the pyramid tract in this animal, and the enormous size of the auditory nerve, which nearly equalled the lumbar cord of the same animal in transverse section. The comparatively small diameter and shortness of the segments of the lumbar cord, as compared with the dorsal segments, was dwelt upon. The brain weighed a few drachms short of forty-five ounces; the animal (a bottle-nosed dolphin) weighed 286 pounds, and was obtained through Mr. Eugene Blackford.

Dr. SPITZKA then presented the specimens and history of a case of neurogliomatous hypertrophy of the pons oblongata transition. (See p. 193 of this number.)

Dr. E. C. SEGUIN, being requested to open the discussion, said that he thought the paper was one which was hardly open to debate, but he welcomed it as a very valuable addition to the literature of these cases.

Dr. M. A. STARR had observed in the specimens and diagrams presented an apparent implication of the acoustic nerve.

Dr. SPITZKA said this nerve was entirely unaffected, and explained its seeming implication.

Dr. C. L. DANA made a brief preliminary report of a case which he thought would be interesting in connection with lesions in this region. The man, about forty-five years old, was brought into his ward with a history of having been ill a very short time. He was strong and robust-looking. He was found to have static ataxia; was unable to walk or stand. There was no motor

paralysis in any of the extremities. There was anæsthesia of the temperature sense, of the tactile sense, and of the pain sense on the right side from the shoulder down, involving the right arm, right leg, and right side of the trunk ; the right half of the face was not involved. There was no anæsthesia of touch, temperature, or pain sense on the left side, but in the left hand and arm there was the most marked ataxia which the speaker had ever seen. The arm showed no tremor nor paresis, but any attempt to place it in a particular position would cause it to fly about in a most senseless manner. There were some cerebral symptoms, but the intellect was clear. In a few days there developed some signs of vagus trouble ; there was some difficulty in swallowing, partial paralysis of the vocal cords, inability to speak loud. The patient died after about three days from the entrance of food into the respiratory tract.

At the post-mortem examination there were found a small aneurism of the basilar artery, a recent thrombus of both vertebral arteries ; near the upper aspect of the right half of the floor of the fourth ventricle was a small spot of softening. The latter lesion, it seemed to him, would account for the ataxia of the left arm. He had not yet prepared the brain further than to photograph it.

Stated Meeting, April 6, 1886.

C. L. DANA, M.D., in the chair.

A NEW THERMO-CAUTERY.

Dr. GRAEME M. HAMMOND presented the instrument, consisting of a Bunsen Burner, which, by the action of a spring and clamp, throwing a platinum tip at right angles to the burner, could at once be converted into a thermo-cautery. It had the advantage over the ordinary Paquelin cautery of being always ready for use.

CASE OF MEDIAN NERVE-SUTURING.

Dr. FRASER C. FULLER presented a man who two and a half years ago sustained a glass cut wound of the lower forearm, resulting in complete division of the median nerve and a part of the sublimus flexor. The nerve was sutured with three small strands of cat-gut a few hours after the injury. The tendons were also united. The operation and dressing were absolutely antiseptic, and primary union took place.

At the time of the operation there was complete cutaneous anæsthesia of the region supplied by the nerve. After several months sensation slowly returned, and a year and a half after the operation it was perfect. Power in the small muscles of the affected hand had not entirely returned.

Dr. FULLER referred to another case in which spontaneous recovery took place, operation being refused. There occurred, however, deep necrosis of the finger-tips, and to constant care and energetic electrical treatment only could the eventual recovery be attributed.

Dr. DANA thought the case illustrated very well the result of the experiments of Johnson and Stockholm, that divided nerves, if sutured, healed in about sixty days, but if let alone they would heal in about ninety days.

Dr. B. SACHS then read a paper entitled : "Preliminary Report on a case (with autopsy) of Tubercular Disease of the Spinal Cord." (To be published in this journal.)

After a few introductory remarks the reader gave a full report of the case, of which the following is a short abstract :

The trouble, which was supposed by the patient to be rheumatic, began with pains in the left shoulder, which radiated down into the arm, forearm, and hand ; by degrees the pain became more intense ; for the first it was confined chiefly to the area of distribution of the ulnar nerve, but had gradually spread over the entire dorsal and volar surface of the left arm and hand ; in addition to this hyperæsthesia (and hyperalgesia), to puffiness of the fingers and to a glossy appearance of the skin, there was marked weakness of the grasp in this left hand, with only slight loss of power in the left upper arm and forearm. The condition of the left upper extremity remained unchanged during the entire course of the disease—a period of about two months. At the time of the first examination—five weeks after initial pains—there were no other symptoms discoverable but these ; a slight paresis and some hyperæsthesia of the left leg, exaggerated knee-jerks and ankle clonus on both sides. These symptoms, chiefly unilateral, continued so until the close of the seventh week ; meanwhile the peresis of the left leg had developed into almost complete paralysis ; in the course of another week this unitateral paralysis was transformed into a complete paraplegia of the lower extremities. The motor paralysis also affected the abdominal muscles, and to some extent the respiratory muscles of the thorax, and

the right upper extremity. Incontinence of urine and trophic changes in the skin were superadded. The sensory symptoms amounted to a general hyperæsthesia of the left half of the body below the level of the third rib; this hyperæsthesia was changed toward the end of the disease into anæsthesia, which spread from the left half, and finally involved the right leg, and to a lesser degree the right half of the trunk and the right upper extremity. A tumor pressing upon the left posterior root fibres of one of the lowest cervical segments was thought sufficient to explain the unilateral symptoms; the bilateral symptoms were attributed to a cervico-dorsal myelitis. But there was no clue during life to the nature of the tumor. The autopsy showed a solitary tubercle, situated on the left side, between the sixth and seventh cervical segments, followed by a cervico-dorsal myelitis; there were *very slight* tubercular deposits in the lungs and intestines.

In his remarks on the case the author of the paper attempted to explain the eccentric characters of the sensory symptoms (no anæsthesia on the side opposite the lesion), the exaggerated knee-jerks, and presence of ankle clonus on both sides, and then referred in detail to the behavior of the muscular sense, which was lost on the side of the lesion, and not on the side opposite the lesion. This was in accord with Brown-Séquard's views and opposed to those of Ferrier. In conclusion the reader asked for discussion of the following points: 1—Differential diagnosis between tumor and other forms of spinal-cord disease. 2—Frequency of tubercular affection of the spinal-cord substance. 3—Unilateral symptoms from spinal-cord disease with special reference to disturbances of sensibility, and of the muscular sense in particular.

DISCUSSION.

Dr. M. A. STARR had, by invitation of Dr. Sachs, made an independent examination of the patient three weeks ago. That which caused them to hesitate in making a diagnosis was the difficulty of harmonizing the sensory disturbances with the assumption of an absolutely unilateral lesion in the cord. It had been said that Brown-Séquard had shown pretty conclusively that anæsthesia on one side and hyperæsthesia on the other were due to a unilateral lesion in the cord on the same side on which there was hyperæsthesia. The autopsy in this case showed pretty evidently that

it did not fall in line with those of Brown-Séquard ; that in the early stage, at least, of unilateral cord disease anæsthesia of the opposite side of the body did not always exist. But it was impossible to draw any definite conclusions from a single case, and he had been unwilling to admit this one as being outside the usual line, because he had previously seen one at the Polyclinic, since reported by Dr. Taylor as confirming in all respects the theory of Brown-Séquard. It was true no autopsy was obtained, but the symptoms seemed to be very definite. Dr. Starr thought the whole subject of sensory conduction in the spinal cord was in an unsatisfactory state. There seemed to be no doubt that the muscular sense tract lay in the column of Goll and crossed in the medulla, not in the cord. That view was confirmed by Dr. Sachs' case. The areas of analgesia and hyperalgesia in the later stages of this case were rather irregularly distributed, thus rendering the study of the sensory tracts in the cord extremely difficult. He had been impressed with the great hyperalgesia in the arms of this patient, the slightest touch even of the nails causing great pain. If the sensory tracks crossed just after entering the cord, why was there not anæsthesia on the right side in this case? Three or four cases had been recorded in which there was some reason to believe that the sensations were conveyed upward through lateral tracts in the cord, anterior to and a little outside of the pyramidal tract. Three or four cases had been reported in which there was ascending degeneration in this tract, and he had himself seen one which was not yet reported. If sensations were carried upward in that portion of the cord it would possibly explain some of the peculiarities in Dr. Sachs' case in which that portion chiefly escaped.

Dr. L. PUTZEL said that if Dr. Sachs referred to miliary tuberculosis of the cord he could say from his own experience that it was not of very infrequent occurrence.

Dr. SACHS said he referred to tuberculosis of the spinal-cord substance, and not of the spinal meninges.

Dr. PUTZEL had seen only one case of that kind in which the disease gave rise to a myelitis with all the symptoms of myelitis. Tuberculosis of the cord had not been suspected. The case occurred in a phthisical woman. It seemed to him that the lesion in Dr. Sachs' case was so diffuse that very little could be learned from it regarding localization and transmission of sensory impressions. Concerning Dr. Starr's views as to the muscular sense

being conducted by the columns of Goll, he had seen some years ago a case of meningomyelitis in which there was considerable thickening of the membranes, posteriorly, and such degeneration of the columns of Goll that it could be seen distinctly through the pia mater, yet there was not the slightest evidence of affection of the muscular sense.

Dr. LEO had seen in institutions a number of cases of tuberculosis in patients suffering from locomotor ataxia, especially in old men.

Dr. E. C. SPITZKA reviewed some of the points in the case, and said he thought the fact that tumors in other portions of the cord had not been excluded deprived the case of much determining value as to the views entertained by Brown-Séquard and referred to in the discussion. He had been somewhat surprised at some of the revelations made during the course of the discussion. He had not considered tuberculosis either of the membranes or of the substance of the cord so common an occurrence in old age that any single observer could have seen a large number of cases, and certainly the suggestion made by Dr. Leo was worthy of following up. Regarding the muscular-sense tract, he thought that if a single case were to be accepted as disproving the supposed function of a given part of the cord there was no part which could not be regarded as without function. He remembered that specimens had been presented before this society in which it was claimed that the colums of Goll had undergone slight degeneration when it was found that there was only a slight thickening of the septum from old age.

Dr. PUTZEL remarked that the case which he referred to was also examined by Dr. Welch.

Dr. GRAEME M. HAMMOND said the question which interested him specially was whether exaggerated knee-jerks and ankle clonus necessarily indicated an organic lesion. He had under treatment a gentleman in whom there was exaggerated tendon reflex and very marked ankle clonus in both the upper and lower extremities on the left side. There was no stiffness, pain, atrophy, or other symptom of spinal disease. After a few doses of ergot the ankle clonus and exaggerated tendon reflex disappeared, to return again after quitting the ergot, and disappearing with its renewal. Two or three years ago he exhibited before the American Neurological Association a man cured of locomotor ataxia, and in whom there was entire absence of tendon reflex, yet under

the influence of ergot the tendon reflex returned. We could hardly conclude that ergot cured true sclerosis or any organic disease. The question arose, were exaggerated reflexes and ankle clonus to be regarded as the effect of organic disease of the cord?

Dr. PUTNAM JACOBI inquired as to the relation between increased patellar tendon reflex and functional disease, and referred to a marked case of hysteria in which during a protracted attack she noticed very marked exaggeration of the patellar tendon reflex.

Dr. SPITZKA said that only a few days ago a child which had polio-myelitis, the right lower extremity only being affected, received for several days in succession double the dose of strychnine which he had intended to administer, which had the effect of producing marked exaggerated knee-jerk and ankle clonus, which had previously been entirely absent. He could not understand why ergot should produce the opposite effect, although he did not doubt that it had done so in Dr. Hammond's case.

In taking up the various points raised in the discussion, Dr. SACHS wished to insist again on the importance of differentiating in his case between the symptoms due to the tumor and those due to the subsequent myelitis; the unilateral symptoms alone could be put to the account of the tumor. Addressing himself to Dr. Spitzka, Dr. Sachs said he did not think it was necessary to suppose several lesions in the cord in order to explain the symptoms at the beginning of the case; the symptoms which developed later in the disease were attributed to the myelitis. Of the initial symptoms the only one opposed to Brown-Séquard's views was the absence of anæsthesia on the side of the body opposite the lesion, and the author explained *that* on the supposition that the fibres in the sensory tract were only pushed aside, and not destroyed by the tumor, retaining their conducting power. Explained in this way the case could be made to accord with Brown-Séquard's views. As to the exaggerated knee-jerks and double ankle clonus, it was admitted by almost all that exaggerted knee-jerk might be present in comparatively normal conditions. The existence of ankle clonus without some change in the lateral column was questioned by many, but it was shown by Professor Pitres to exist as early as eight hours after an apoplectic attack, and that therefore in his (Dr. Sachs') case it would not be necessary on account of these symptoms alone to assume multiple lesions. Dr. Sachs agreed with Dr. Spitzka concerning the infre-

quency of tuberculosis of the spinal cord. The best authorities claimed that tuberculosis of the spinal-cord substance was exceedingly rare.

Dr. LEO, in reply to a question, said he did not claim that the tabes dorsalis in the cases which he had seen in old people was due to tuberculosis of the cord ; the existence of the two diseases may have been a mere coincidence.

Dr. G. M. HAMMOND thought that exaggerated tendon reflex or ankle clonus might be due to either a localized congestion or anæmia of the cord, and this would explain why in one case they were relieved by strychnia and in another by ergot.